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EXAMINER

MENON, KRISHNAN S

ART UNIT

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DELIVERY MODE

01/16/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Claims 11-19 are pending as amended 12/8/08

Claim Rejections - 35 USC § 102

1. Claims 11 and 14-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Friedman (US 4,715,955).

Friedman teaches the claimed invention – see figs 4,6 and 7 and excerpts copied below:

“As shown in the modified embodiment of FIG. 6, for example, an end plate 61 is provided with a feed channel 62 having five transverse portions 63, a retentate channel 64 having five transverse portions 65, and a pair of filtrate channels 66, 67 each having four transverse portions 68. The end plate 61 would be used in the same manner as described above for the end plate 13 but would accommodate an ultrafiltration module (not shown) having five feed passages, five retentate passages, and eight filtrate passages. An additional modification in the end plate 61 is that ends of the feed and retentate channels 62 and 64, respectively, terminate in ports 71 and 72 in one side wall 73 of the end plate 61 while the filtrate channels 66 and 67 terminate, respectively, in outlet ports 75 and 76 in an opposite end wall 77 of the end plate 61. Use of the end plate 61 would be desirable when fluid handling equipment would be most easily positioned on opposite sides of the ultrafiltration apparatus.” (column 5, lines 38-57)

and,

“As shown in FIG. 4, the transverse filtrate channel portions 52, 54 from acute angles with an upper surface 55 of the end plate 13. Outer ends of the longitudinal filtrate channel portions 51, 53 terminate, respectively, with outlet ports 56, 57 in the sidewall 37 of the end plate 13.” (Column 4, lines 19-24)

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See the figure 4 reproduced below: channels (52,54) form declining acute angles so that the filtrate would drain down into the filtrate outlet channel

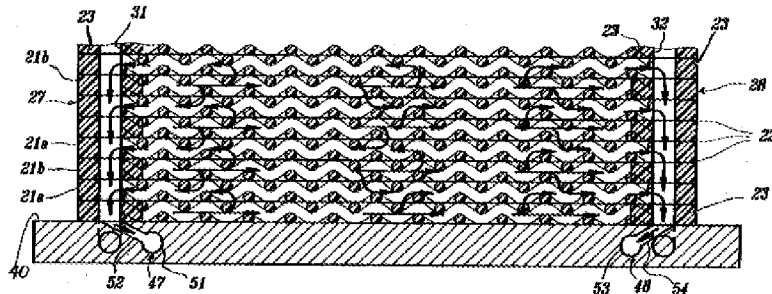


Fig. 4

Flow paths are as claimed; "pressurized fluid" is not a patentable limitation in the apparatus claims.

Claim Rejections - 35 USC § 103

2. Claims 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Latour et al (US 4,849,102) and/or Friedman (US 4,715,955).

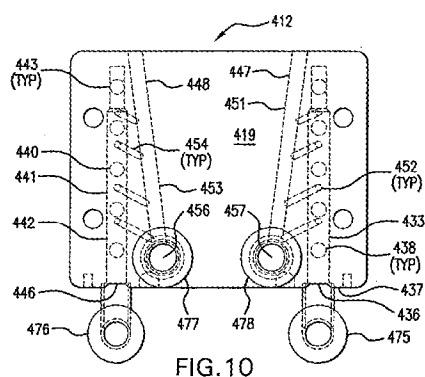


FIG. 10

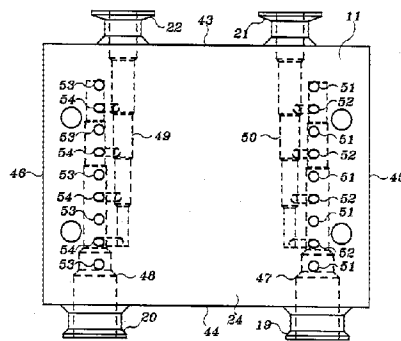


FIG 3

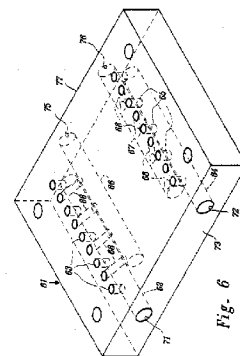


Fig. 6

. Applicant' figure 10, assumed to be best representing the claims in comparison with figure 3 of Latour and figure 6 of Friedman.

Friedman teaches a filtration housing with an end plate having parallel feed and retentate channels, and filtrate channels, wherein the filtrate channels have transverse portions, the transverse portions forming acute angles with the upper surface of the end plate. See fig 6 above, as well as fig 4 of the reference. Particularly, this reference teaches:

"As shown in FIG. 4, the transverse filtrate channel portions 52, 54 form acute angles with an upper surface 55 of the end plate 13. Outer ends of the longitudinal filtrate channel portions 51, 53 terminate, respectively, with outlet ports 56, 57 in the sidewall 37 of the end plate 13." (Column 4, lines 19-24)

Latour teaches a filtration housing and cassette assembly (12, see figures), in which the housing comprises first and second parallel plates (11,13,14), plate 11 having feed inlet (19) and retentate outlet (20) channels at opposite edges, and filtrate channels (21,22) having first portions (49,50) and second transverse portions (connecting 49 to 54 and 50 to 52) as claimed. These channels communicate with the respective feed, retentate and filtrate channels of the cassettes. The plates are movable on frames to change the number of cassettes loaded as desired.

The teaching of the Latour reference differs from the claims in the 'acute' orientation of the transverse filtrate channels with respect to an upper surface of the first end plate. Friedman teaches the transverse filtrate channels as being at an acute angle with a face of the end plate, but this does not appear to be the "upper surface" as claimed. The [first] plate (11) of Latour is also a central plate (communication to the

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filter cassettes from both major surfaces), whereas the applicant depicts it as an end plate (communication to the cassettes only from one major surface). Latour refers to Friedman and teaches his design as an improvement over that of Friedman, who has the plate with inlet and outlet channels at an end. However, the “acute” orientation of the transverse filtrate channel is only an obvious design change in shape and/or orientation, which one of ordinary skill in the art is capable of; and are not patentable unless can be shown otherwise. Changes of size, shape, etc without special functional significance are not patentable. *Research Corp. v. Nasco Industries, Inc.*, 501 F2d 358; 182 USPQ 449 (CA 7), cert. denied 184 USPQ 193; 43 USLW 3359 (1974). Applicant has not demonstrated any criticality of having the acute angles in the transverse filtrate channels to overcome a prima facie case of obviousness.

Response to Arguments

Applicant's arguments filed 12/8/08 have been fully considered but they are not persuasive.

The transverse filtrate channels in Friedman are at declining acute angles (to assist flow) as claimed. Please note that the basis of the decline in the acute angle is not specified. Therefore, it is assumed that the decline is with respect to the drain down of the filtrate, which the Friedman reference meets. However, if the decline is with respect to some other reference point or line, then the claims would be obvious over Friedman, because any such decline to make the filtrate flow easier would be within the

skill level of one of ordinary skill to design, and would not be patentable without additional (secondary) evidence for patentability.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S. Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Krishnan S Menon/
Primary Examiner, Art Unit 1797